

KG P30TT KG P2TU Exa KG P23TT KG P32TT KG P21TT KG PTTS Flag His Pire

ATG GGG GGT TCT CAT CAT CAT CAT CAT GGT ATG GCT AGC ATG GAT TAC AAG GAC GAC GAT GAT ATC GAA GGT CGC Ser His His His His His His Gly Met Ala Ser Met Asp Tyr Lys Asp Asp Asp Ile Glu Gly Arg Met Gly Gly

Lys Arg AAA GGT GTF TCC ATC GAC AAA TTC CGT ATC TTC TGC AAA GCT AAC CCG AAA AAA GGT CTG AAA TTC ATC ATC AAA CGT Lys Gly Val Ser lle Asp Lys Phe Arg lle Fle Cys Lys Ala Asn Pro Lys Lys Gly Leu Lys Phe lle lle

Tyr Thr Pro Asn Asn Glu lle Asp Ser Lys Gly lle Arg Glu Asp Asn Asn lle Thr Leu Lys Leu Asp Arg Cys Asn TAC ACC CCG AAC AAC GAA ATC GAC TCC AAA GGT ATC CGT GAA GAC AAC ATC ACC CTG AAA CTG GAC CGT TGC AAC

Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe Asn Val Val Asn Ser Lys Gly Phe Asn AAC TTC ACC GTT TCC TTC TGG CTG CGT GTT CCG AAA GTT TCC GCT TCC CAC CTG GAA AAA GGT CAG TAC ATC AAA GCT Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu Lys Gly

AAC AAA GGT GAA AAG AAG ATC GCT AAA ATG GAA AAA GCT TCT TCT GTT TTC AAC GTT GTT AAC TCT AAA GGT TTC AAC

Asn Lys Gly

Gin Tyr lle Lys Ala

AAC TCC AAA TTC ATC GGT ATC ACC GAA AAA GGT GGA TCC TAA Gin Ser Lys Phe Ile Gly Ile Thr Glu Lys Gly Gly

FIG. 2

: 3 **,** 4

# FIG. 2(contb.)

Flag Fra KG P23TT KG P32TT KG P21TT KG P10TT KG P30TT KG D2TT KG HBVnc KG HA KG HBSAg KG NT KG Ire Titis

N N

ATG GGG GGT TCT CAT CAT CAT CAT CAT GGT ATG GCT AGC ATG GAT TAC AAG GAC GAC GAT GAT ATC GAA GGT CGC Ser His His His His His His Gly Met Ala Ser Met Asp Tyr Lys Asp Asp Asp Asp Ile Glu Gly Arg ਨੁੰ Met Gly

AAA GGT GTT TCC ATC GAC AAA TTC CGT ATC TTC TGC AAA GCT AAC CCG AAA AAA GGT CTG AAA TTC ATC ATC AAA CGT Lys Gly Val Ser ile Asp Lys Phe Arg lie Phe Cys Lys Ala Asn Pro Lys Lys Gly Leu Lys Phe ile ile

TAC ACC CCG AAC AAC GAA ATC GAC TCC AAA GGT ATC CGT GAA GAC AAC ATC ACC CTG AAA CTG GAC CGT TGC AAC lle Thr Leu Lys Leu Asp Arg Cys Asn Tyr Thr Pro Asn Asn Glu lle Asp Ser Lys Gly lle Arg Glu Asp Asn Asn

AAC AAA GGT GAA AAG AAG ATC GCT AAA ATG GAA AAA GCT TCT TCT GTT TTC AAC GTT GTT AAC TCT AAA GGT TTC AAC Asn Lys Gly Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe Asn Val Val Asn Ser Lys Gly Phe Asn

Ser Phe Tro Leu Arg Val Pro Lys Val Ser Ala Ser His Leu Glu Lys Gly Gln Tyr Ile Lys Ala AAC TTC ACC GTT TCC TTC TGG CTG CGT GTT CCG AAA GTT TCC GCT TCC CAC CTG GAA AAA GGT CAG TAC ATC AAA GCT Asn Phe Thr Val

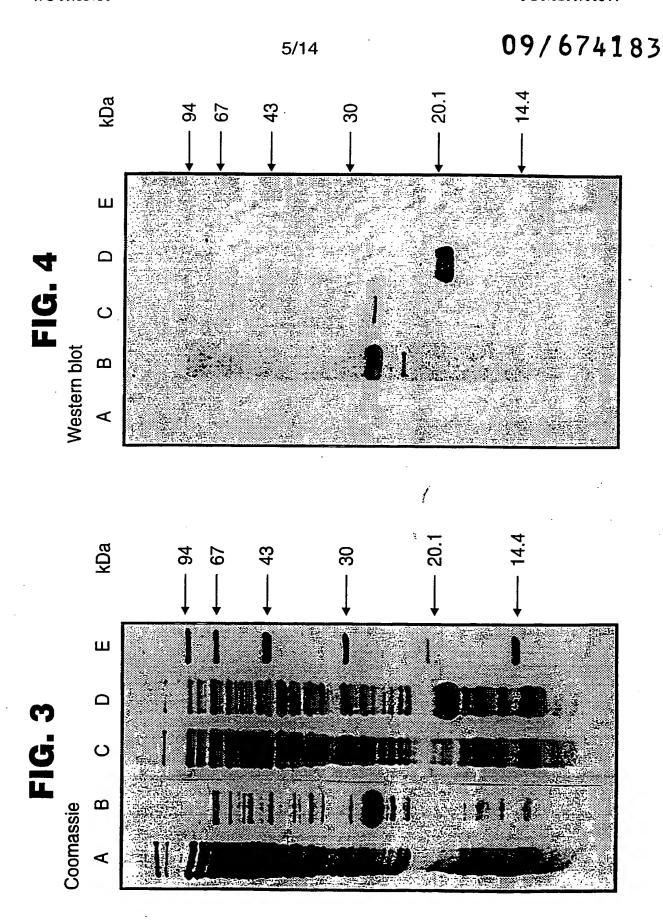
:3 .= . .  AAC.TCC AAA TTC ATC GGT ATC ACC GAA AAA GGT GGA TCT CCG CAT CAT ACC GCG CTG CGC CAG GCG ATT CTG TGC TGG Ser Pro His His Thr Ala Leu Arg Gin Ala Ile Gin Ser Lys Phe He Gly He Thr Glu Lys Gly Gly

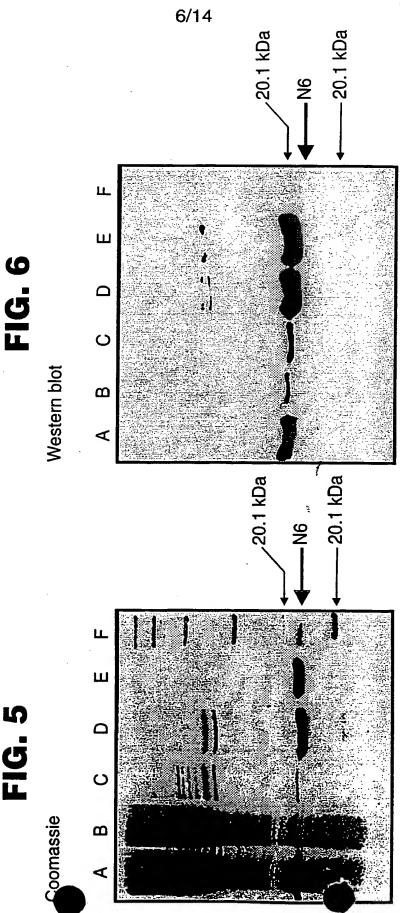
GGC GAA CTG ATG ACC CTG GCG AAA GGA TCT CCG AAA TAT GTG AAA CAG AAC ACC CTG AAA CTG GCG ACC AAA GGA TCG Lys Gln Asn Thr Leu Lys Leu Ala Thr Lys Gly Ser Gly Glu Leu Met Thr Leu Ala Lys Gly Ser Pro Lys Tyr Val

TTT TTT CTG CTG ACC CGC ATT CTG ACC ATT CCG CAG TCT CTG GAT AAA GGC TAT TCT GGC CCG CTG AAA GCG GAA ATT Phe Phe Leu Leu Thr Arg lle Leu Thr lle Pro Gin Ser Leu Asp Lys Gly Tyr Ser Gly Pro Leu Lys Ala Glu lle

GCG CAG CGC CTG GAA GAT GTG AAA GGA TCC TAA Ala Gln Are Leu Glu Asp Val Lys Gly Ser End

## FIG. 2(CONTD.)





ARG

ASP

CTG

CTG

AAA

ACC THR

AAC ATC ASN ILE

GAC AAC ASP ASP ASP

GAA

CGT ARG

ATC (ILE )

GGT

AAA LYS

TCC SER

GAC ASP

ATC ILE

AAC ASN

AAC

CCG

ACC THR

LYS

KG HSP70 KG PRO POSITI KG POSITI KG POSITI KG POSITI KG POSIT KG POSIT KG HBVMC KG HA KGHBSAG KG MI

CGC ARG GGT GAA ASP GAT GAT ASP GAC ASP GAC LYS AAG TAC ATG GAT MET ASP AGC SER GCT ATG MET GGT CAT CAT CAT CAT HIS TCT GGT GGG ATG MET

AAA ATC ILE ILE PHE TIC AAA LYS LEU GLY GGT AAA LYS LYS AAA ဗ္ဗဘ PRO AAC ALA GCT AAA CYS IGC AIC CGI GAC AAA ASP LYS ATC ILE TCC GLY GGT AAA LYS

ASN GLY LYS AAA SER AAC ASN GTT VAL GIT VAL AAC ASN  $_{
m TTC}$ VAL GTTSER ICI SER  $_{
m ICT}$ GCT LYS. ALA AAA GAA ATG MET LYS AAA ALA GCT ATC ILE AAG LYS LYS AAG GAA GGT AAA LYS AAC

AAA CAG GLN GGT GLY LYS AAA GLU GAA LEU CAC HIS SER ALA GCT TCC SER GTTVAL AAA 922 PRO GIT VAL ARG CIGLEU  $\mathbf{IGG}$ TRP  $\vec{\mathbf{J}}$ PHE ASN

TGC CYS GCG ATT ALA CAG ပ္ပင္ပ GCG CTG THR ALA LEU ACC CAT HIS CAT PRO SER GLY GGA GLY GGTAAA LYS GAA GIO ACC THR ATC ILE GLY GGTATC ILE LYS PHE AAA SER AAC

: |--

, <u>.</u>

GGA GLY GTG AAA CAG AAC ACC CTG AAA CTG GCG VAL LYS GLN ASN THR LEU LYS LEU ALA

ILE ATT GCG GAA GLU ALA TYR SER GLY PRO LEU LYS TAT TCT GGC CCG CTG AAA TIT IIT CIG CIG ACC CGC AIT CIG ACC AIT CCG CAG ICT CIG GAT AAA GGC PHE PHE LEU LEU IHR ARG ILE LEU THR ILE PRO GIN SER LEU ASP LYS GLY

TAT

AAA

PRO LYS TYR

SER

GLY

LYS

CTG GCG AAA

GGC GAA CTG ATG ACC CTG GCG GLY GLU LEU MET THR LEU ALA

CAG ATT CAG GTG TAT CAG GGT GAA CGT GAA ATC GIN ILE GLN VAL TYR GLN GLY GLU ARG GLU ILE GLN PRO SER VAL GLN ILE GLN VAL TYR GLN GTT CAG CCG TCT LYS GLY SER GGA AAA VAL GTG GLU ASP GAT GCG CAG CGC CTG GAA GLN ARG LEU

GGA TCC TAA GLY SER END AAA TCT CAT AAC SER HIS ASN

ij . d  ည္ပည

GAA GLU

GAT ASP

GAT ASP

AGC ATG GAT TAC AAG GAC GAC SER MET ASP TYR LYS ASP ASP

GLY MET ALA

GCT

GGT

CAT CAT CAT (HIS HIS (

CAT CAT CAT OHIS HIS HIS H

GGT TCT (GLY SER F

GLY 999

ATG

ARG

GLY

ILE

CGT

ATC ILE

ATC

 $_{
m TTC}$ PHE

CTG AAA LEU LYS

AAA LYS

CCG AAA PRO LYS

AAC

CCT

TGC AAA

TTC CGT ATC TTC TGC PHE ARG ILE PHE CYS

AAA

GAC

ATC

ILE ASP LYS

SER TCC

VAL

GLY GGT

AAA LYS

LYS ALA ASN

GLY GGT

ILE

### AAC

CGT TGC

GAC ASP

CIGLEU

CTG AAA

LYS

LEU

THR ACC

ILE

ASN

GLU ASP ASN

ILE ARG

GLY GGT

CCG AAC AAC GAA ATC GAC TCC AAA PRO ASN ASN GLU ILE ASP SER LYS

TYR

GAA GAC AAC AAC ATC

CGT

9/14

AAC GGT

GLL

GTTVAL

TTC AAC

GTTVAL

 $_{\rm ICI}$ SER

 $\mathtt{TCT}$ 

GCT ALA

GAA AAA GLU LYS

GCT AAA ATG ILE ALA LYS MET

GAA AAG AAG ATC

GLU LYS LYS

GLY

PHE

AAC ASN

GGT

AAA LYS

AAC

PHE ASN

GLY AAA SER TCT AAC VAL ASN

AAA ATC ILE CAG TAC GLN GGT GLY AAA GAA GLU CAC CTG HIS LEU SER  $\mathbf{I}^{\mathsf{CC}}$ TCC GCT LYS" VAL SER ALA CCG AAA GTT PRO GTT VAL CTG CGT TRP LEU ARG TIC IGG PHE SER GTT TCC VAL THR ACC

 $_{\rm IGG}$ LEU ILE CAG GCG F ည္ပည CAT ACC GCG CTG LEU ALA HIS HIS CCG CAT PRO SER TCT GGA GLY ggGLY AAA LYS GAA GLU ACC GGT ATC A TTC ATC ILE AAA ICC AAC GLN

GLY ACC AAA (THR LYS ( GCG ACC ALA CTGLEU CAG AAC ACC CTG AAA GLN ASN THR LEU LYS GTG AAA ( TYR VAL TAT CCG AAA PRO LYS TCT GGA GLY LYS CTG GCG AAA THR LEU ALA ATG ACC CTG LEU GIO GAA

KG P23TT KG P32TT KG P21TT KG PJT3 KG P30TT KG P2TT KG HBVmc KG HA KG HBsAB KG

AAA LYS

AAA GCT AAC CCG AAA LYS ALA ASN PRO LYS

TGC

ATC ILE

CGT PHE ARG

TIC

AAA

GAC ASP

ATC ILE

TCC SER

TCT

GGA **GLY** 

AAA LYS

GTG

GAA GAT

CTG

CAG CGC GLN ARG

ALA

VAL

LYS

PHE

ILE

GAC AAC AAC ASP ASP ASP

CGT GAA (

ILE

GLY

LYS

AAA

GAC TCC A

AIC ILE

GAA GLU

AAC

CCG AAC PRO ASN

ACC

TAC

CGT

AAA LYS

ATC ILE

ATC ILE

TTC

CTG AAA LEU LYS

AAC

GIT SER VAL

SER

LYS ALA

AAA

GAA

AAA ATG LYS MET

CCT ALA

ATC (ILE /

AAG

GAA AAG GLU LYS

GGT **GLY** 

LYS

AAC

AAC

TGC

CGT ARG

GAC

CTG

AAA

LEU

GTT

AAA

ASN

ATT

ეეე

AAA LYS

CTG LEU

CCG

GGC

TCT

66C

AAA LYS

GAT

CTG

SER

CAG

CCG PRO

ATT ILE

ACC

CTGLEU

ATT

ပ္ပပ္ပ THR ARG

ACC

CTG LEU

CTG LEU

TAT

TYR

LEU GTT

TCC GCT SER ALA VAL LYS CCG AAA LEU ARG VAL PRO GIT CGI CTG TGG TTC SER TCC VAL GTT THR TIC PHE TTC AAC AAC PHE ASN ASN GLY LYS AAA SER TCT AAC GII VAL

GCG CCG CAT SER TCTGGA GGTGLY LYS AAA GAA GLU THR ACC ATC ATC GGT ILE GLY PHE  $_{
m TTC}$ LYS AAA TCC AAC GCT LYS AAA ILE TAC CAG GLY AAA LYS

TCC SER GGA **GLY** AAA LYS CTG GAT CCG CAG TCT PRO GLN SER CTG CTG ACC CGC ATT CTG ACC ATT LEU LEU THR ARG ILE LEU THR ILE TTT PHE GGA AAA ACC 909 ALA CIG LEU LEU LYS CTG AAA

ACC

CAG

AAC

GTG AAA

TAT TYR

AAA

GGA

AAA LYS

525

ACC CTG

CTG ATG LEU MET

GAA GLU

၁၅၅ GLY

 $^{\mathrm{IGG}}$ 

 $_{\rm IGC}$ 

CTGLEU

ATT ILE

CYS

ALA

CAG

CGC ARG

g p

PRO

SER  $_{
m TCT}$ 

GLY

ALA

THR LEU

FIG. 8(CONTD.) GLY THR

TAA

.= .= 

FIG. 9

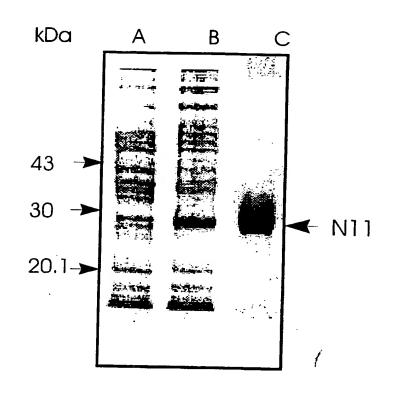
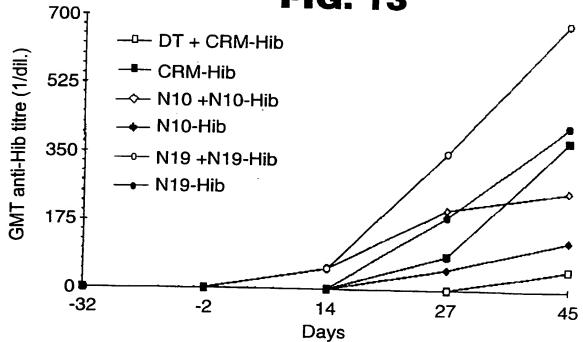
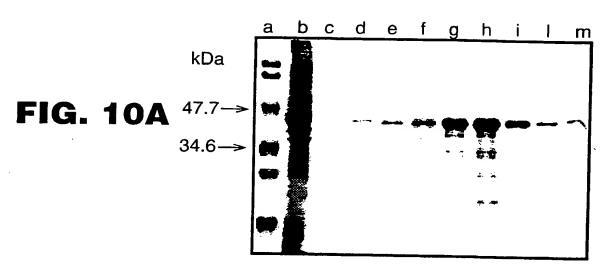
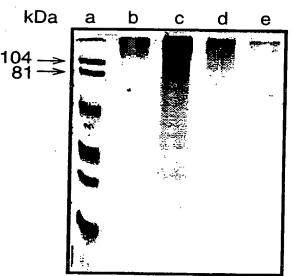


FIG. 13



12/14





**FIG. 10B** 

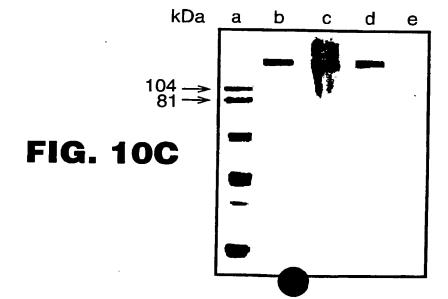
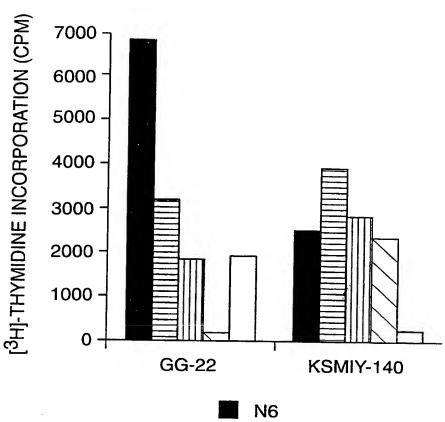


FIG. 11



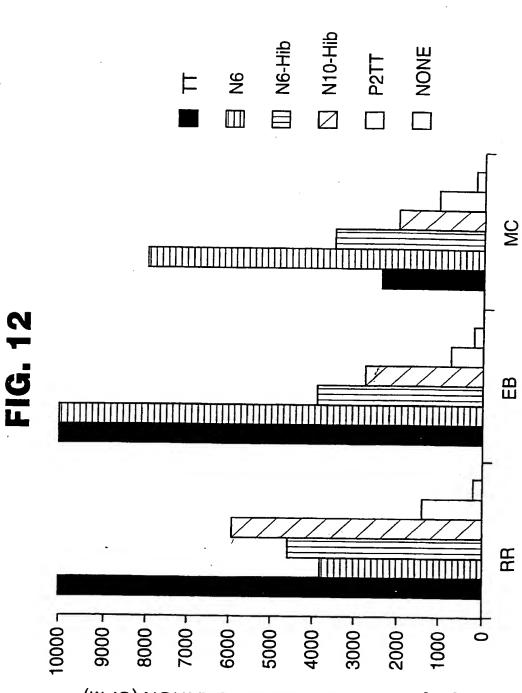
N6-Hib

N10-Hib

P2 TT

P30 TT





(CPM) INCORPORATION (CPM)